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ABSTRACT

This document contains three papers from a symposium on learning organization practices. "Learning Lenses of Leading Organizations: Best Practices Survey" (Laurel S. Jeris) shows that successful learning organizations view learning initiatives through multiple lenses with a clear, sustained focus on strategic outcomes. "Dimensions of the Learning Organization in Family-Run Firms" (Karen E. Watkins, Gary L. Selden, Victoria J. Marsick) finds that learning organization characteristics significantly predict overall financial and knowledge organizational performance. In "Research as Development: Evaluating a Learning Organization Implementation" (Laura L. Bierema), the following significant evaluation issues emerged from a study at the Ford Motor Company: articulating and sustaining shared vision, defining and demonstrating performance in a learning organization, and cultivating learning at individual and collective levels. (KC)

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15 Learning Organization Practices

Chair: Verna J. Willis, Georgia State University

Learning Lenses of Leading Organizations: Best Practices Survey
Laurel S. Jeris, Benedictine University

Dimensions of the Learning Organization in Family-Run Firms
Karen E. Watkins, The University of Georgia
Gary L. Selden, Kennesaw State University
Victoria J. Marsick, Columbia University

Research as Development: Evaluating a Learning Organization Implementation
Laura L. Bierema, Michigan State University

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Learning Lenses of Leading Organizations: Best Practices Survey

Laurel S. Jeris
Benedictine University

Despite an explosion in the literature on learning organizations, there is very little empirical research. Practitioners in many organizations remain skeptical about the benefits, meaning, and feasibility of becoming a "Learning Organization." This paper describes a study of eight leading organizations who participated in a "Best Practices Survey." The results indicate that initiatives are more systemic and more broadly conceptualized than the research has indicated to date. Substantial support was found to show that organizations view learning initiatives through multiple lenses with a clear and sustained focus on strategic outcomes.

The most powerful and useful concepts in the study of organizations are simple ideas presented clearly, a combination that occurs less often than one might imagine. This paper will explore the muddy waters surrounding the concept of the learning organization, a term popularized by Peter Senge in his book The Fifth Discipline (1990). In this paper the terms learning organization (LO) and organizational learning (OL) refer to a related and overlapping set of constructs. This paper will not provide yet another definition of either term. Rather, it is an attempt to understand and clearly articulate how, through learning, organizations are meeting the challenges posed by "permanent white water." Both a seminal study and actual case study examples from organizations who participated in a "Best Practices Survey" will be explored to provide insights that may illuminate the confusion, resistance, and multiple approaches to understanding and interpreting the meaning of "learning organization" and "organizational learning."

Problem Statement and Theoretical Framework

A special interest group of the American Society of Training and Development (ASTD) recently completed a survey of eight organizations across several industries, investigating current practices and behaviors in implementing the kinds of systemic changes involved in becoming a learning organization. The Learning Organization Network of ASTD has been investigating this topic for several years. The study reported here really began in 1993 when the idea of a "lens" framework was proposed in the article, "Portrait of a Learning Organization: Stories of Early Adopters" (Marsick et al., 1994). In that grounded theory study the authors submitted that a system level learning theory-in-use might be guiding the particular approach a given organization takes as it transforms itself. The framework of four lenses emerged to describe the learning processes of organizations who characterize themselves as learning organizations. In other words, an organization might use one of four lenses through which it views these processes, and that lens would, in turn, shape the initiatives.

The OL literature and more recently, the LO literature have been the subjects of comprehensive reviews and structural analyses for organizing thematic elements (Argyris and Schon, 1978; Huber, 1991; Dixon, 1992; DiBella, 1996 among others). The lens framework, on the other hand, arose from the interview responses provided by the organizations who participated in the study by Marsick et al.

The research results that will be reported here came about as a result of the third iteration of this ongoing inquiry by the ASTD Special Interest Group. The lenses, cultural (C), experiential

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(E), informational (I), and structural (S), were elaborated through a number of behaviors that should be observable if that lens is active. This was accomplished through an extensive literature review and analysis and comprised the second iteration in the research process. Once the behaviors for each lens were developed it was possible for yet another group of volunteers to generate and pilot a semi-structured interview guide. With the completion of the pilot, volunteers were sought from the Learning Organization Network of ASTD to conduct the interviews with senior managers of learning organization initiatives in organizations who were actively engaged in such initiatives. Ultimately eight organizations participated in the interview process and the results were submitted to this researcher for coding and analysis.

Research Questions

The purpose of the interview guide was threefold. First, the questions were designed to elicit in-depth responses regarding the types of interventions, change strategies, and learning initiatives underway in these organizations. Hence, the questions sought both broad philosophical descriptions and behaviorally oriented practices. Second, the researchers posited that given the size and resources of the participating organizations, a number of best practices regarding change initiatives, specifically focused on creating and sustaining learning as an organizational capability, would emerge from the interview data. Third, the researchers, while interested in testing the lens framework, primarily used it as a vehicle to develop an integrated framework of behaviors for exploring learning theories-in-use by these large organizations.

This exploratory study was designed to provide preliminary answers and to guide further inquiry regarding three questions:

1. To what extent do organizations operate within a particular lens when pursuing change strategies dependent on increasing their organizational learning capacity?

2. To what degree are certain behaviorally oriented practices present and consistent across organizations in which learning organization initiatives are underway?

3. To what degree can theories-in-use be identified both through system level design and through specific practices guiding interventions across organizations in which learning organization initiatives are underway?

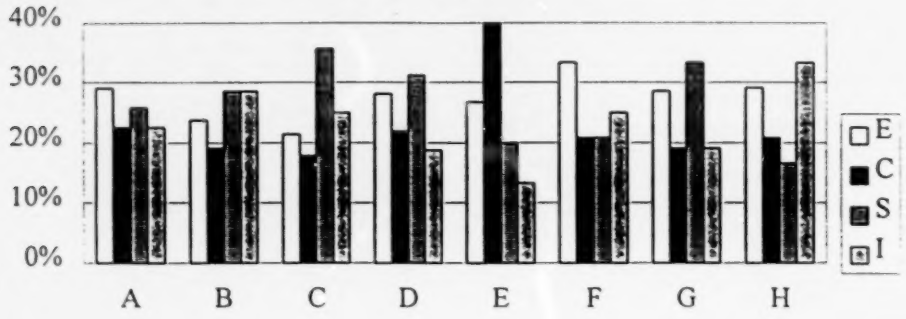
Methodology

The research team (see **Acknowledgments**) that developed the behavioral descriptions of the lens framework identified five core behaviors and a varying number of secondary behaviors for each one of the four lenses. These behaviors, sorted by lens, provided the operational definitions of the lenses and lent themselves well to the following coding strategy. An initial analysis of the interview data was completed using a simple computerized word-match search process to identify terminology from the interview data consistent with the behavioral descriptors for each lens. Deeper content analysis followed to assess the validity of the word-match process and to identify contextually embedded behaviors not revealed by the initial analysis. Once identified, these behaviors were coded by lens, tallied, and graphed by organization. Four organizations were then selected for even deeper analysis on the basis of their most preferred lens. These four organizations each revealed a different preferred lens yielding the opportunity for cameo case studies to further explore the feasibility of the lens framework. The content analysis was validated by two other raters familiar with the research framework but blind to the initial results. Differences were resolved through consensus.

Results and Conclusions

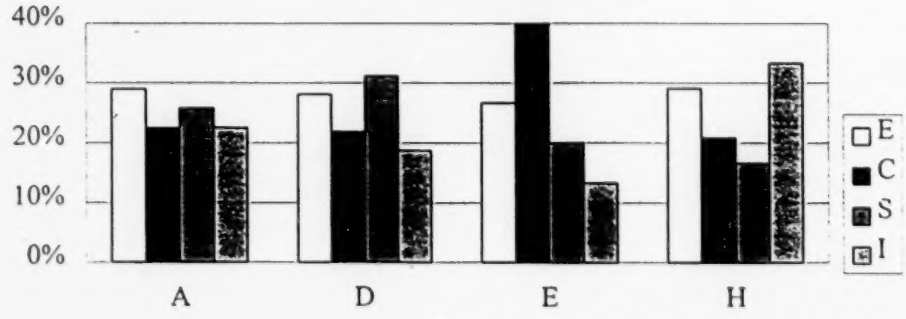
In response to the first research question, the hypothesis that an organization uses a single lens for shaping initiatives did not hold up as strongly as had been predicted by Marsick et al., but the results resemble the preferred and backup preference patterns often seen on multi-dimensional style instruments. Seven of the eight organizations displayed a primary lens preference and a back-up lens preference. One organization had an equal primary preference for the structural and informational lenses.

Table 1. Percent of Behaviors Grouped by Lens
All Eight Organizations



Beyond the analysis for lens preference, the best practice information was gleaned from both a quantitative analysis, noting frequency of the behaviors across organizations, and from content analyses focused on the desired future states of the organizations as described by the interviewees. Four organizations, each one holding a different primary lens preference, were selected for cameo profiles to check some of the hypotheses put forth in the seminal article (Marsick et al.). There the authors posited that while an organization may have a distinct preference for a single lens, that preference has certain shortcomings which may inhibit the effectiveness of the learning organization initiative. The examination of the four companies revealed that in each case the back-up lens preference would counteract the potential drawbacks of the most preferred lens.

Table 2. Percent of Behaviors Grouped by Lens
Four Selected Organizations



For example, Company A's most preferred lens is experiential. Although this lens may be the most desirable way to deeply engage organizational issues, challenge framing assumptions, and alter existing behaviors and practices, the degree to which an organization is able to support these learning opportunities may be inhibited by a functional structure that severely restricts the flow of information. Hence, the learning opportunities are not available across the organization. However, Company A's back-up lens (second most preferred lens) is structural (see Table 2). The behaviors attributed to the structural lens all describe structural interventions and configurations that would support collaboration and dialog with all organizational stakeholders.

An organization that responds to triggers from the environment through the structural lens, as is true in the case of Company D, may find that function does not necessarily follow form. Using the experiential lens as the back-up enables the organization to support structural changes with ample developmental opportunities for increasing member capacity for deep learning. Similarly, an organization with a decided preference for the cultural lens (Company E) may become impatient and frustrated by the slow pace at which true cultural shifts occur. A back-up preference for the experiential lens indicates once again, a significant organizational commitment to a broad range of employee developmental plans and opportunities to infuse the organization with the human resource capability to withstand high change *and* engage in learning.

Finally, Company H, whose preference for the informational lens slightly exceeds that for the experiential lens, recognizes that, "Information systems are only as intelligent as the users that create and access them" (Marsick et al, 1994, p. 249). As in the case of the other three organizations selected for the cameo profiles, the behaviors attributed to the experiential lens are visible when there is a significant commitment to employee development from learning perspective. Table 3 summarizes both the learning processes and strategic outcomes for these four organizations.

The experiential lens is either the primary or back-up lens for these four organizations. Further, out of the total sample of eight organizations, this lens was found to be most preferred by one organization, of secondary importance to six organizations, and of tertiary importance to one organization. This finding appears to provide support for the second research question which asks, to what degree are certain behaviorally oriented practices present and consistent across organizations in which learning organization initiatives are underway? Marsick et al. noted that the transformational process associated with the experiential lens referred to the deliberate engagement of organizational issues to both resolve, and learn through them. In order for this engagement to successfully occur the organization must enhance individual, group and organizational capacity for innovation and learning (p.248). Not only were the behaviors associated with the experiential lens consistently noted across all eight organizations, seven of the eight organizations demonstrated a marked preference for developing those behaviors in their work forces.

Finally, in response to the third research question, these findings indicate that, at least for the organizations in this sample, initiatives are more systemic and more broadly conceptualized than the research has indicated to date. Substantial support was found to show that organizations view learning initiatives through multiple lenses. The implications of these findings for HRD are discussed below.

Table 3. Summary of Interview Results for Companies A, D, E, & H

Company	Preferred Lens	Primary Learning Processes	Strategic Outcome
A	Experiential	Lots of JIT Training. People involved in their own development. People understand their role in the organization. Only org where people reported, "This is fun!"	Dramatic reduction in cycle time - staff completed a project in eight days that would have taken six months to complete prior to learning organization initiative.
D	Structural	Heavy emphasis on measurement of performance. Structure promotes dialog, creativity and information sharing. Structure adapts easily to new tasks.	Company moving from "analysis paralysis" to maturing customer focus in an effort to be well prepared for entering a deregulated environment as a highly successful competitor.
E	Cultural	Vision driven with minimal bureaucracy. Practices replaced when usefulness is outlived. Heavy emphasis on valuing differences to become truly transcultural.	Leadership development - final metrics due in 1997 but all milestones have been met.
H	Informational	Extensive use of information technology for environmental scanning and all types of internal communication. Systems in place to capture and store learning.	Internal customized training group competes successfully (on full charge-back system) with outside vendors who are often far less expensive but not nearly as customized.

Frequency of Behaviors Additional findings as displayed in Table 4 indicate that, although the most preferred lens may vary from organization to organization, the most frequently reported behaviors and the least frequently reported behaviors form baseline indicators of important organizational capabilities. The most frequently reported behaviors could serve as guideposts for many organizations who are engaging in change initiatives through organizational learning. These best practices then are the necessary but far from sufficient conditions for moving forward. Without exception, the least frequently reported behaviors were voiced in terms of a desired future state. Comments such as "we're not there yet," or "that is something that is very difficult for us to do but we are trying," framed attempts at institutionalizing the behaviors that either have been identified in the literature as indicators of organizational learning or supporting organizational learning, or are firmly held beliefs of the organizational leaders of participating organizations.

Table 4. Summary of Most and Least Frequently Reported Behaviors Eight Organizations

Lens	Most Frequent Behaviors All Companies	Most Infrequent Behavior All Companies
Cultural	Tradition and norms are challenged in the search for better ways. Bureaucracy is minimized in favor of productivity.	Diversity, the valuing of difference, is perceived as integral to shared learning. Risk-taking is actively encouraged at all levels of the organization
Experiential	Learning is supported with plentiful resources. Leaders model calculated risk-taking and experimentation. People actively take responsibility for their own development. People actively seek to learn from each other in the course of their work.	Training is assessed based on learning outcomes.
Structural	Performance measures relate to learning outcomes. Work groups are organized around business processes.	Mentoring and coaching are vital to each individual's role.
Informational	Useful information from the customer, supplier and community is fed back into the organization. Systems are in active use for people to express their ideas.	

Implications for HRD

The research results' implications for HRD theory and practice are two-fold. First, a number of HRD professionals have been intrigued with the concept of organizational learning or learning organizations, but they have been understandably skeptical of what they fear will be another set of "flavor of the month" interventions. Further, this relatively new area of research remains highly abstract and difficult to apply. These issues are further complicated by the apparent values alignment for the HRD professional with the construct of learning. After all, is that not what HRD is all about—development and change through learning? The stories of these eight organizations, told through the interviews and analyzed through a behavioral filter, illuminate some intra- and inter-organizational perspectives on certain types of change initiatives. However, a recurring theme throughout the interviews was a resistance to labeling various processes or initiatives as "learning" or as typical of a "learning organization." HRD practitioners must remain sensitive and attuned to the strategic goals of organizations and assist their organizations in establishing clear links between learning interventions and strategic outcomes.

Second, the research process itself, the iterative nature, all-volunteer effort, changing groups of researchers, and developing design, provides a fresh model for HRD practitioner/scholar research partnerships. This design, while unconventional, provides numerous opportunities for challenging existing assumptions and reexamining the research questions. The process is shared here in an effort to encourage HRD students, scholars, and practitioners to experiment with their research designs, take some risks, and involve stakeholders in non-traditional ways. The topic itself demands innovative research techniques and this design expands standard notions of organizational research.

Acknowledgments

Special thanks go to Verna Allee, Andy Walker, Judy O'Neil and John Redding as members of the executive committee of the Learning Organization Network of ASTD. These tireless volunteers completed the extensive literature review that supported the elaboration of the behaviors for each lens, designed the interview guide and piloted it. In addition, they also conducted six of the eight interviews for this study.

Sincere appreciation for participation as interview subjects goes to the following companies: Motorola, Sun Microsystems, Integris *Health*, Pacific Gas and Electric, City of New York - Department of Personnel, Ameritech, University of Texas Medical Branch School of Allied Health Sciences, and AT&T.

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Dimensions of the Learning Organization in Family-Run Firms

Karen E. Watkins
The University of Georgia

Gary L. Selden
Kennesaw State University

Victoria J. Marsick
Teacher's College, Columbia University

This paper reports findings from an ongoing study of dimensions of the learning organization found in family run firms. The research project involved use of the Dimensions of the Learning Organization Questionnaire (DLOQ) developed by Watkins and Marsick (1996) to determine profiles of high and low scoring firms. These dimensions of the learning organization significantly predicted overall financial and knowledge organizational performance.

Despite long term interest in the concept of the learning organization, little has been done to empirically document and explore the phenomena in family run firms. Some argue that existing theories of organizations may not hold true for family businesses (Dyer, 1994; Handler, 1989; Hollander,1990). Dyer (1994), for example, says that, ". . .many of our theories about the nature of individuals, groups, and organizations may not hold up in the context of the family firm" (p. 125). This study will help researchers identify family businesses' current performance relative to these dimensions of the learning organization.

Research by Watkins and Marsick (1993, 1996) identified seven dimensions of the learning organization which might indicate the capability of the organization to learn. They have developed an instrument to assess these dimensions in organizations. Therefore, the purpose of this research was to measure learning organization dimensions across one type of organization, the family-run firm using their instrument.

Three research questions were answered in this study:

1. Is there a significant difference across family-run firms [as differentiated by size and annual revenue] on the seven dimensions of the learning organization?
2. Is there a significant difference between where the organization reports that it is now and where it should be relative to the seven dimensions of the learning organization?
3. Is there a significant difference on where an organization is now on the seven dimensions of the learning organization between high and low financial and knowledge performance family firms?

Theoretical Framework

The theoretical framework undergirding the research is a model of the learning organization developed by Watkins and Marsick (1993, 1996) in which critical changes which must occur at the individual, group, organizational, and system levels were identified based on an extensive review both of learning organization literature and practical learning organization experiments. These action imperatives form the basis for the Dimensions of the Learning Organization Questionnaire (DLOQ) used in this study. Six dimensions were identified in Watkins and Marsick (1993), and an additional dimension concerning the overall leadership required to implement these action imperatives was added in their later work (Watkins and Marsick, 1996). These dimension are: create continuous learning opportunities, promote dialogue and inquiry,

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promote collaboration and team learning, empower people toward a collective vision, establish systems to capture and share learning, connect the organization to its environment, and provide strategic leadership for learning. An additional scale measures financial and knowledge performance.

Family businesses as learning organizations present interesting theoretical questions. On the one hand, the characteristics of the learning organization seem ideally suited to the needs for continuous learning and change of family businesses transitioning from one generation's leadership to that of another. On the other, certain traits of family businesses and of family business leaders in particular may mitigate against adoption of learning organization characteristics (Selden, 1996).

Family businesses often operate as though they had blinders on, oblivious to the pressures being exerted on their companies from their environments. Founders of these businesses are often unwilling to listen to advice, collaborate with others, or recognize their own weaknesses. "They unknowingly get themselves, their families, and their businesses in deep trouble fostering cultural patterns that are not amenable to change" (Dyer, 1986, p. 59).

Much has been written about the characteristics of family business leaders (Kets de Vries, 1977; Schein, 1983; Zaleznik, 1977). House (1977) claims that these leaders have "extremely high levels of self confidence, dominance, and a strong conviction in moral righteousness of his/her beliefs" (p. 200). They also effectively role model, create impressions of competence and success, articulate ideological goals, communicate high expectations plus confidence in followers, and generate motive-arousing behaviors. These traits are found in the literature concerning leaders of learning organizations (Bales, 1994; Brooks, 1992; Senge, 1990; Watkins and Marsick, 1996).

However, Dyer (1986) delineates some characteristics of founders of family businesses that may negatively impact their development as learning organizations. In general, he says they tend to distrust other authority figures, be self-reliant, reject advice from others, exercise power in seemingly arbitrary and capricious ways, be secretive about their activities, totally organize and control their business and family activities, be reluctant to delegate to others, develop a philosophy that is followed implicitly, and be portrayed by themselves and others as "larger than life" (p. 61).

Methodology

This is survey research and descriptive and correlational statistics were used to describe current and ideal status among family-run firms in achieving the dimensions of the learning organization. Since there were minor adaptations to the survey to accommodate family business terminology, we tested each scale for reliability and compared these responses to previous results. Table 1 below reports alpha coefficients for each scale for both this sample of family businesses and from previous samples.

Table 1. Scale Reliability Scores

Scale Name	Alpha	Alpha [Family Business]
Continuous Learning	.76	.74
Inquiry & Dialogue	.83	.78
Team Learning	.88	.88
Structures to Capture Learning	.74	.86
Empowerment	.86	.83
Systemic Connections	.86	.76
Provide Leadership	.86	.83
Measuring Results	****[1]	.82

All alpha scores were acceptable, ranging from .74 to .88.

Research question one was answered using one-way analyses of variance and a Tukey-HSD test of significance. Research questions two and three were answered using t-tests. Significance was set at .05.

[1] This is a new scale so there is no previous reliability score for comparison.

Data Sources and Evidence

For the purposes of this study, family-run firms were defined as an organization where two or more family members own more than 50 percent of the company and where more than one generation of family members work in the business. These family businesses must also have ten or more employees, annual revenues of $2 million or more, and at least ten years of continuous operation. The majority of the names on this list were selected from the Dun and Bradstreet Directory. Family businesses were identified from this directory by looking for more than one shareholder with the same last name and with shares amounting to more than 50 percent of the total shares. All other criteria were readily identified in this directory. Over 62,000 family businesses were identified using this method by the Family Business Research Center housed at Kennesaw State University. The sample selected for this study is a random sample drawn from among those family businesses whose addresses contain the zip codes found in a 2 hour driving radius of Atlanta, Georgia. This includes family businesses in Georgia, Florida, Tennessee, North and South Carolina, and Alabama.

Research in family businesses is not like research in any other type of organization (Handler, 1989; Levinson, 1983; Ward, 1987). Family businesses are often first and foremost families. By their very nature, families are private entities. Personal information concerning the business is often kept very close to the vest. Ward (1987) concludes that "Gaining access to data about family businesses will always be difficult. Not surprisingly, such companies want to keep information on strategy, financial performance, and family relations private and confidential" (p. 253).

The surveys were distributed to 2,966 family run firms in the United States meeting these criteria. Of these, only 17 were returned as undeliverable as addressed which yielded a final sample size of 2,949. Plagued by low response rates [an average of 8% for solo research efforts such as this, Astrakhan, 1997], family business research requires considerable effort to ensure a usable sample. At this point in this research, 68 surveys have been returned, slightly more than a 2% return rate. Unfortunately, due to delays in mailing, surveys did not go out until the Thanksgiving-Christmas holiday season and arrived near the deadline for return. Subsequently, a postcard encouraged respondents to return the surveys and extended the deadline. Currently, we are resending the survey to a more targeted subsample of the original sample, those 1200 family businesses in the Athens-Atlanta areas. We will use follow-up calls to encourage return of the survey. Additionally, we will ask for a session at an upcoming Family Business Forum at Kennesaw State University and administer the survey there. Therefore, the results to be reported here will be treated as a preliminary pilot run.

Results and Conclusions

Respondents reported that an average of 3.42 family members owned stock while 3.15 family members worked in these family firms. Family members owned an average of 90.29% of all stock. The average size of the businesses represented in this research was 50-99 employees. Average annual revenues were $10-25 million.

Findings for each of the research questions follow.

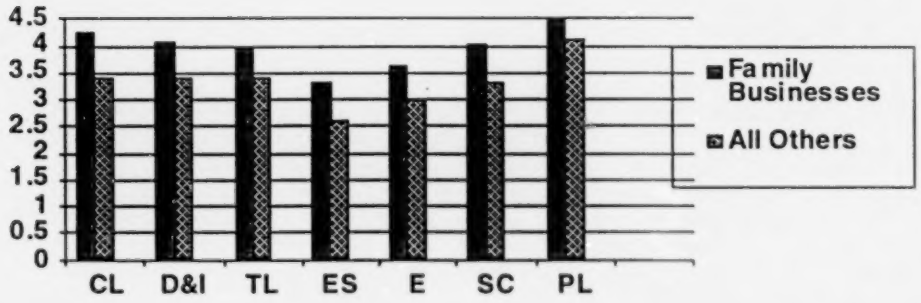
1. *Is there a significant difference across family-run firms [as differentiated by size and annual revenue] on the seven dimensions of the learning organization?*

There is no significant difference based on size on any of the seven dimensions of the learning organization. Annual revenue accounted for a significant difference ($p=.05$) on only one dimension of the learning organization, "establish systems to capture and share learning." Family businesses with revenues of over $25 million reported a mean on this scale of 22.68 while those with revenue of under $5 million reported a mean of 15.71 and those reporting revenues of $5-25 million reported a mean of 19.93.

2. *Is there a significant difference between where the organization is now and where it should be relative to the seven dimensions of the learning organization?*

As we would expect with an "is and should be" scale, there were significant differences on all seven dimensions of the learning organization between where family business leaders see their organization at this time and where they believe it should be. This research question enabled us to determine whether or not family business leaders agreed that these were ideal dimensions for their organizations. Figure 1 below depicts a comparison between family business means and mean scores from all previous samples.[2] Family business means are consistently higher. One possible explanation for this is that almost all other respondents were human resource personnel while family business respondents were leaders or owners of their businesses.

Figure 1. Comparison of Family Businesses with Previous Norms



The overall pattern of highs and lows are consistent across the two groups reported here. Both groups scored lowest on "creating systems to capture and share learning" and highest on "providing strategic leadership for learning."

A more in-depth look at high and low scoring items helps to clarify how these family businesses see their organizations' current performance on the dimensions of the learning organization. Table 2 below presents these data.

[2] Note that this is a six point scale so means appear to be higher than they actually are.

Table 2. High and Low Scoring Items by Dimension

Dimension	Highest Item	Lowest Item
Continuous Learning	"help each other learn." [4.6]	"identify skills they need for future work tasks." [3.4]
Inquiry & Dialogue	"regardless of rank, may ask 'why.'" and also "treat each other with mutual respect."[4.6]	"listen first to others' views before speaking." [3.4]
Team Learning	"expect members to act as equals." [4.2]	"are rewarded on the basis of team achievement." [3.7]
Structures to Capture Learning	"enables people to get needed information at any time quickly and easily." [4.6]	"records its lessons learned so that they are publicly available." [2.6]
Empowerment	"rewards people for taking initiative." [4.3]	"gives people control over the budget needed to accomplish their work." [3.2]
Systemic Connections	"considers the impact of decisions on employee morale." [4.6]	"encourages people to think from a global perspective." [2.9]
Provide Leadership	"leaders generally ensure that the organization's actions are consistent with its values." [4.8]	"leaders generally empower others to implement the organization's vision." [3.9]
Financial Performance	"response time for customer complaints is better than last year."[4.5]	"the cost per business transaction is less than last year." [3.8]
Knowledge Performance	"customer satisfaction is greater than last year." [4.7]	"the number of new products and services is greater than last year." [3.7]

According to the survey, these seven dimensions of the learning organization are present in family run firms. These more specific findings indicate that this sample feels that they have improved their customer responsiveness while their costs have gone up and new development has not. There is less emphasis on empowering strategies for individuals, teams, and systems and greater emphasis on a culture of respect and value congruence.

One of the strengths of family businesses is the familial feeling one has working for this type of firm. This was evident in several of the items on which the sample scored high: questions concerning people helping others to learn, treating others with mutual respect, considering the impact of decisions on morale, and encouraging others to bring customers into the decision process illustrate this trait. Leaders also scored high on ensuring that the organization's actions are consistent with its values. Values are often the glue that holds family businesses together.

Some findings are puzzling given the family business literature. For example, this sample scored high on seeing that people have resources for learning. Yet, learning in family businesses is often reserved for family members. Similarly, this sample said that teams generally expect to function as equals and that individuals are encouraged to ask, "Why?" Typically, family businesses have a culture that discourages non-family members from asking questions about how or why something is done. Also, team dynamics alter drastically when a family member is on the team. Finally, these results suggest that people can get needed information quickly while family business literature suggests that family businesses are often secretive in nature. Some of these inconsistencies may be attributed to the fact that these surveys were completed by family business leaders who may not experience the dynamics noted here.

On the other hand, many of these findings are consistent with family business literature. For example, leaders here reported that they do not listen to others' views before speaking which is consistent with family business leadership literature which emphasizes their self-reliance. Not

recording lessons learned so that they are publicly available is consistent with a secretive culture. People may not be given choices in work assignments since work is often organized around family members needs and skills and teams may not be awarded for their achievement due to inequality of rewards which favor family members. Finally, leaders are reluctant to delegate or to empower others to implement the organizational vision. This seems consistent with an entrepreneurial leader who is "larger than life."

3. *Is there a significant difference on where an organization is now on the seven dimensions of the learning organization between high and low financial and knowledge performance family firms?*

Interestingly, financial and knowledge performance did account for significant differences across these family firms. We divided the sample between those firms reporting that their current financial performance when compared to last year was above average [n=36] and those reporting that it was below average [n=28]. *Firms reporting above average financial performance differed significantly on all seven dimensions of the learning organization* as depicted in Table 3 below. In fact, most were significant at the .005 level. All were significant at the .05 level. Means are presented as totals for each scale [highest possible mean is therefore 36].

Table 3. Correlations between firms reporting above and below average financial performance on dimensions of the learning organization

Dimension	Cont. Lrng	Inquiry & Dialogue	Team Learning	Embed-ded Structure	Empow-erment	System Connec-tions	Provide Leader-ship
Below	23.5	23.1	21.5	17.21	18.8	22.6	24.8
Above	26.6	25.6	25.6	21.9	23.9	25.3	28.0

Table 4 below reports a comparison of the means of firms reporting above [n=34] and below [n=30] average performance on the knowledge results variables in this survey. *All differences were significant at the .05 level except the differences between the means of above and below average knowledge performing firms on "providing support for continuous learning."*

Table 4. Correlations between firms reporting above and below average knowledge performance on dimensions of the learning organization

Dimension	Cont. Lrng	Inquiry & Dialogue	Team Learning	Embed-ded Structure	Empow-erment	System Connec-tions	Provide Leader-ship
Below	24.3	23.6	21.8	16.6	19.0	22.4	25.2
Above	26.0	25.3	25.5	22.8	24.0	25.5	27.8

Multiple regression analysis yielded an estimated multiple correlation coefficient of .570 and the R-square was .324. This means that over one-third of the variance in overall organizational performance [both knowledge and financial performance combined] can be explained by the learning organization behaviors measured in this instrument. It is difficult to speculate on the meaning of theses results at this point with such a low response rate. Nevertheless, it is provocative to find that these seven dimensions of the learning organization consistently predict higher overall responses on both financial and knowledge performance variables. Further research will seek to confirm this important finding.

Educational and Scientific Importance of this Study

This study is significant to our understanding of the learning organization because it enables us to begin to track movement across critical dimensions over time and to begin the process of determining norms for this type of business. Future research efforts are focused on whether or not these dimensions consistently correlate with higher financial and knowledge performance results, and to determine differences across types of organizations. Further research on these outcome measures of organizational learning will allow organizations not only to track their progress in implementing the learning organization construct, but also to monitor whether or not their implementation is yielding higher levels of learning and financial performance at the organizational level. Findings from this preliminary study underscore the importance of these learning organization dimensions as predictors of desired organizational performance results.

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Research As Development: Evaluating A Learning Organization Implementation

Laura L. Bierema
Michigan State University

This study shares an evaluation of a three-year implementation of a learning organization at Ford Motor Company's Electric and Fuel Handling Division (EFHD). The implementation was evaluated by EFHD employees. Significant evaluation issues included articulating and sustaining shared vision, defining and demonstrating performance in a learning organization, and cultivating learning on both individual and collective levels. The implications of the evaluation will be discussed in terms of the learner, learning process and learning infrastructure.

The learning organization model is being applied as a process to improve organizational performance. Becoming a learning organization involves adopting a holistic, systemic focus (Senge, 1990; Watkins and Marsick, 1993). Companies such as Ford Motor, Coca-Cola, Nortel, Land O'Lakes, and Johnsonville Foods have documented performance success as a result of such initiatives (Watkins & Marsick, 1996). While the literature on organizational performance in learning organizations is growing, the documented evaluation of such initiatives is less plentiful. This article shares a participant evaluation of a comprehensive learning organization implementation at the Electrical & Fuel Handling Division (EFHD) of Ford Motor Company. EFHD is part of the automotive components industry, one of the largest industries in the world. EFHD supplies starters, alternators, wiper motors, injectors, fuel pumps, cell distributorless ignitions, ignition coils, and throttle bodies to Ford and other automobile manufacturers. Chartered in 1988, EFHD originally managed facilities in Michigan and Indiana. Today, EFHD is a global business with 6,135 employees at facilities in Michigan, Indiana, Ireland, Great Britain, Hungary, China, Japan, and Mexico. The majority of the plants are unionized. Recent sales and profits have shown an unprecedented, dramatic turn around for the business. EFHD attributes a significant part of its resurgence and performance to becoming a learning organization.

Theoretical Framework

The learning organization notion grew out of the discipline of systems thinking. It is an alternative to the Machine Age logic behind workplace design and management. The prevailing Machine Age, or mechanistic model, is founded on the principles of hierarchy, control, fragmentation and reductionism. The mechanistic model offers most employees, with the exception of managers and professionals, little control over their workplace activities. Jarvis (1992) emphasizes that, "In this organizational and technological world of work individuals learn to become divided selves and to cope with life. . . .Learning how to fit in is a non-reflective learning process" (Jarvis, 1992, p. 180). There are few rewards in the workplace of today for admitting, "I don't know," or "I need help," or "I might be wrong." Instead, employees are rewarded for competing against each other, having the right answers and moving quickly in moments of crisis, often not taking time to reflect on the consequences of their decisions or actions.

Senge regards the Systems Age as, "a worldwide, fundamental shift in management philosophy and practice" (1993, p. 5). The systems perspective recognizes that seeking organizational control is futile. Instead, systems thinkers pursue prediction based on patterns and behaviors over time, recognize that natural systems are self-organizing and that order evolves from disorderly, chaotic processes. Harnessing workplace learning has been suggested as an answer to shifting from the Machine Age to the Systems Age perspective, and interest is growing

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in the application and evaluation of workplace learning. Essentially, making this shift calls for new models of management.

The current design of work and the development processes are not only mechanistic, but also insensitive to adult learning and development across the lifespan. Merriam and Caffarella observe that, "Learning in adulthood is an intensely personal activity" (1991, p. xi). Yet, organizations function to organize, control and often constrain workplace development. Merriam and Caffarella also estimate that 90 percent of the population is involved with at least one self-directed learning activity a year (1991, p. 54), and Marsick and Watkins (1990) observe that much of the learning in the workplace is either incidental or unintended. What is known about adults as self-directed learners is that they need personal autonomy, they have the willingness and ability to manage their own learning, they need a context that gives them control over their learning, and they meet learning goals without the use of formal institutions or methods (Candy, 1991). In spite of this, much of the development that occurs in the workplace is formal, productivity based, and fragmented. Managers who believe that employees are motivated only to serve the corporate interest are missing the opportunity to capture the inherent energy and enthusiasm that adults bring to their personal learning.

The essence of the learning organization is to capture, share and facilitate the learning that is naturally occurring in the organization. The EFHD story provides an outstanding model and practice for effectively implementing a learning organization.

Learning Organization: EFHD's Strategic Imperative

EFHD embraced Peter Senge's model from the 1990 book *The Fifth Discipline* as a framework for implementing the learning organization process. EFHD believes that the key to becoming a best-in-class, high performing organization lies in their ability to learn faster and more effectively than the competition. EFHD has designed plans to improve both work and interpersonal processes in this quest. EFHD's Vision states, "As a Learning Organization, we will generate a high level of customer satisfaction by providing subsystems, products, and services with best-in-class quality and best-in-class costs." EFHD's goal is to achieve maximum organizational performance through learning. Intended results include: learn faster than the competition, achieve maximum value and zero waste, optimize knowledge *and* understanding, and use energy to be a best-in-class producer (rather than fighting political battles). EFHD's Strategic Initiative proposes, "To be an organization that fosters the five disciplines of the Learning Organization; specifically, Systems Thinking, Personal Mastery, Shared Vision, Team Learning, and Mental Models" (for definition of the disciplines see Senge, 1990). EFHD has worked to create an infrastructure supportive of learning. The infrastructure is designed to create and sustain the learning organization process and incorporates: cultivating a supportive culture, promoting learning organization awareness, building capacity and involvement, and adopting a community focus.

EFHD began the learning organization initiative in 1992 with the formation of the Product Launch Success Team, chartered to create high performance launch processes of new and current product lines. Simultaneously, the executive management (Division Operating Committee) began its efforts to create a culture based on team learning and shared vision. Although becoming a learning organization is a strategic imperative of EFHD, participation in the process is entirely voluntary. Today, there are 30 active team learning projects involving 1200 EFHD employees.

Research Questions

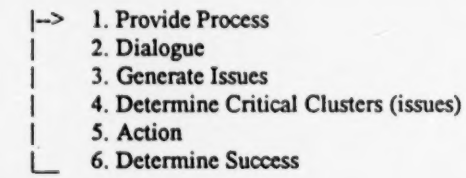
The purpose of this study was to evaluate the implementation of a learning organization at EFHD using the company's learning model and systems dynamics tools. Guiding questions included: 1) What sustains the process? 2) What prevents the effective implementation of a learning organization process? and 3) What are the results of implementation beyond obvious performance improvements?

Methodology

A unique qualitative approach was used that applied the EFHD learning model as a framework for data collection and analysis. Data were collected over a three year period from 1993-1996. Participants were a globally and hierarchically diverse sample of EFHD employees who voluntarily participated in a sixty-hour introductory course on the theory and practice of the learning organization. Data were collected through over 500 hours of participant observation in both training and work settings, using semi-structured post-training interviews with 25 employees, written surveys, electronic mail, journals, dialogue meetings, and two sessions to evaluate the process using systems dynamics tools and the EFHD learning model involving 20 employees.

This study is the last arm of a three year qualitative evaluation of the implementation at EFHD. It focuses on the employee evaluation of the process using EFHD's learning organization model and tools. This distinct approach applied the EFHD learning model as a framework for data collection and analysis. Participants in the study participated both by providing and analyzing data. Two separate employee groups participated representing a cross section of the workforce. Twenty employees participated in the process.

The Learning Model, now used in all EFHD learning projects, was developed by the Product Launch Success Team. The EFHD learning model follows six basic steps:



In a large organization it is difficult to share lessons learned. Because of time constraints and constant personnel churning, procedures are rarely written, which results in repeated errors. The EFHD organizational learning model emphasizes shared learning by developing and documenting processes, policies, and stories. The learning model follows these steps: It *provides processes* for capturing learning which is the purpose of the model. The next step is *active reflection* about work related problems and visions through a process of *dialogue*. Once the *issues* are *generated*, they are *clustered* by similarity. Finally, *actions* and decisions can be generated from the critical clusters. All this information is recorded and owned by the team. The final step in the process is to *determine success* and repeat the cycle. The model is circular representing a continuous loop of learning that can be begun at any point (Bierema & Berdish, 1996a).

This tool, grounded in systems thinking, is used to reveal patterns that may not be obvious in day-to-day operations of the organization. Systems thinking is concerned with understanding the interrelationships of variables within the system and the patterns and structures that support them. Senge et al (1993) note that the linking concept among the prevailing systems theorists of today is, "that behavior of all systems follows certain common principles" (p. 89). The models provided through "systems dynamics" originally developed by Jay Forrester, at MIT, provide tools useful for analyzing systems behavior. Systems laws and principles can be observed and learned. Learning how to work with the structures at play in the organizational system is important in a learning organization.

Data were analyzed using the constant-comparative technique. Data were organized into themes using the systems dynamics tools of hexagons (Idon, 1992) and causal loops (Brassard, 1989). Trustworthiness of the data was verified through the use of multiple data sources, member checks, and longitudinal data collection. EFHD employees also assisted in the data analysis process.

Results and Conclusions

The 1996 Study EFHD's performance results since efforts began to create a learning organization are impressive. Key areas of performance improvement include: a dramatic financial turnaround, improved employee attitude surveys, company leadership in achieving total productive maintenance checkpoints, and new product launches that exceed budget objectives in quality, costs, and timing. The Product Launch Success Team (PLST) is just one example of how a team with the formidable task of launching an new automotive system used the learning organization process to radically improve every aspect of the product launch process. The work of the PLST has become a benchmark for other learning teams.

The goal of an earlier study (Bierema & Berdish, 1996b), was to probe beyond performance measures and understand results from a learning perspective in terms of how employees evaluated their learning and how they assessed organizational learning. These results indicate that the nature of the learning was multifaceted. The study found significant individual learning on personal levels (outside work, with families and civic organizations), interpersonal levels (relationships with other people both inside and outside work), and professional development levels (enhancing work-related skills). Learning on a collective level was also identified being significant in terms of how employees communicated and learned together and the impact this learning through dialogue had on the organization. At the organization-level, the theory and tools of the learning organization were being applied to EFHD team projects and problem solving. There was an increase in self-directed learning projects that participants felt were inspired by the learning organization process. Participants also reported having a new more systems-oriented, big-picture, long term focus. The study also identified the key impediments to the learning organization as: management support, peer support and resources.

The Employee Systems Evaluation Eleven clusters of EFHD learning organization evaluation were identified by the two employee groups. A content analysis was done on the clusters to distill the key patterns among the clusters. Three categories emerged from the causal loop and content analysis of the clusters: Shared vision, performance, and learning. Each will be discussed. The hexagon categories are listed in the following table.

Shared Vision	**Performance**	**Learning**
Tensions	Tensions	Tensions
Awareness	Actions	Dialogue—skill set
Mixed Messages	Dialogue +/-	Mixed Messages
Sustaining Process	Leftovers	Better Sex
	Mixed messages	Sustaining Process

Shared Vision. Cultivating a shared sense of vision is a key aspect of creating a learning organization. Upon evaluation, participants had mixed feelings on how well this component of becoming a learning organization was met. Their concerns related to articulating, sustaining and advancing the vision of becoming a learning organization. In terms of articulating the vision, they felt that the EFHD definition of a learning organization was still foggy. There was also a sense that inconsistent views about what the vision was were held in the organization. A question was raised about what the business plan said about learning organizations and how it impacted daily functioning.

There was also concern about sustaining the vision in the midst of a challenging competitive environment with competing demands on employees' time. The participants felt that a marketing campaign was needed to remind people about the vision and definitions. It was also suggested that the learning organization principles and tools needed to be resurrected at regular meetings. Hourly personnel's access to the vision was also of concern based on the reality that those employees have less control over their schedule and ability to leave their work stations to learn about and practice learning organization techniques. There was also a deep sense of disappointment that learning organization follow-up had not been more comprehensive and

consistent. This disappointment was not fueled by anger, but by a sense of lost opportunity to advance the learning organization understanding and process.

There was also great interest in how the learning organization process would advance beyond the introductory training and learning teams that had been established. The future plan was unclear to the participants. There was a sense that EFHD was the only division in Ford applying this process, that they were an island, and that the process would not go further. Although the vision aspect did confuse employees on some levels, the experience of participating in the introductory course and learning teams resulted in a high level of enthusiasm and willingness to work on moving the process forward.

Performance. The notion of performance raised several concerns in the systems evaluation of the process. There was anxiety related to the tension between meeting production demands while applying learning organization standards of behavior in the organization. Employees also felt at a loss or powerless when it came to resolving this tension. There was frustration that short term reactiveness to productivity issues conflicted with the long term systemic orientation of the learning organization vision. There was also a sense that some actions in the organization were inconsistent with learning organization values. For instance the culture was more oriented toward reacting and responding to crises in the heat of the moment, versus creating more proactive structures that prevented such behavior patterns in the system.

There were mixed reviews with how well the organization performed when it applied the learning organization process and tools. The most visible tool was dialogue. There were reports of dialogue that worked both well and poorly. Although the employees gave the organization's use of dialogue an average assessment, it was regarded as a powerful tool and the most visible evidence that the learning organization offered a new structure that could be a more effective way of attaining results.

Understanding what performance means in a learning organization is a source of tension. Is it high productivity? High quality? Open, honest communication? Superior learning? Knowledge advocacy? Admitting "I don't know?" All of these? Some of these? None of these? These questions nagged the participants in the hexagon sessions.

Learning. Learning as a result of the learning organization process was the most positive, often unexpected outcome of the process. The learning was especially significant on an individual level with significant reporting of self-directed learning projects related to the learning organization implementation.

The employees raised issues related to learning on both individual and team levels. The most often cited learning experience on the individual and team level was learning and practicing the technique of dialogue. While not without its challenges, the dialogue process was regarded as a useful tool when used correctly. The participants felt exicted about using dialogue initally, but when the process broke down they were less inclined to use it. Upon reflection, the participants felt that they should have pushed using the dialogue process harder when it broke down, rather than stopping the process.

Participants were aware of forces that prevented them from learning such as time pressures, organizational politics, non-supportive supervisors/colleagues, confusion over the process, and lack of application opportunities. Time pressures were blamed with interfering with learning on both levels. While dialogue was an important learning, it was also the skill that participants felt needed more cultivating.

There were also unexpected benefits or unintended consequences of the organization's quest to become a learning organization. Participants cited improved family relationships, better ability to communicate, clearer focus on personal goals, new perspectives on old problems, and improved teamwork.

Implications

What can be learned from EFHD's experience? EFHD has continuously learned as it has led the way in learning organization implementation in both Ford Motor Company and U.S.

manufacturing. As there are no recipes for creating a learning organization, EFHD's has applied its lessons to continually structure and redesign learning organization processes.

Earlier research on the EFHD implementation revealed that the key variables responsible for success were rooted in fostering individual and team learning while creating an infrastructure supportive of both learning and practice. The 1997 evaluation suggests that the EFHD infrastructure needs fine-tuning in the areas of creating shared vision, specifying and demonstrating performance objectives in the context of a learning organization, and continuing the facilitation, capturing and sharing of learning on both individual and collective levels. Further, these opportunities for improvement must be considered in terms of the learners, learning processes and learning infrastructure in the EFHD system.

The employee evaluation raises issues that deserve attention, but also celebration. This process is valuable as a model of learning organization evaluation. It also perpetuates the EFHD learning model by using the learning model to create new knowledge about the learning organization process. Through the process, EFHD has promoted employee development, created an evaluation and practiced the tools of the process. The implications of the employee evaluation will be discussed in terms of the EFHD learners, learning processes and infrastructure.

Learners Just as adult educators function as enablers of learning, so too must organizational leaders act to facilitate the learning process in a learning organization. This challenge involves supporting learner needs in the organization. Adults bring a natural tendency to learn to the workplace. Knowles (1990) in his theory of andragogy—the art and practice of facilitating adult learning—suggested that adult learners: value learning the subject under study, are self-directed, rely on previous experience, value learning that meets a present need or goal, are life-centered as opposed to content-centered, and have a high degree of intrinsic motivation to learn.

The EFHD experience has demonstrated that the employees value the learning organization process and see its usefulness not only at work, but in life. Further, the EFHD experience documents that the learning organization process has motivated significant number self-directed learning projects (Bierema & Berdish, 1996b). Organizations attempting to become learning organizations will benefit by understanding and catering to adult learners.

The next challenge is to expand the facilitation of the adult learning that is already occurring in the organization. The essence of the learning organization is to cultivate (not smother) the natural adult tendency to be self-directed and intrinsically motivated in their learning. The learning must also be explicitly connected to personal and organizational vision.

Learning Process At EFHD, sharing stories and distilling learning from them is an explicit goal of becoming a learning organization. EFHD created its learning model to foster this exchange. The stories then can be taken to a higher level when systems dynamics tools of analysis are applied to them, as was done in this study. This analysis involves understanding events, patterns, structure and mental models at play in the organizational system. Events are isolated occurrences of problems, conflicts, breakdowns and successes that in and of themselves don't tell us very much about the system. The problem is however, that huge amounts of energy and time are expended reacting to events. This behavior is often called fighting fires. Several events strung together often show a pattern of behavior over time. The pattern may be virtuous or vicious. It is a pattern nonetheless. Structure is an entity made up of patterns repeated over time. These patterns often go unquestioned in organizational life. Mental models are the assumptions that guide the beliefs and behaviors of the members of a system.

EFHD has created a structure for learning: the learning model. The issue that employees repeatedly raised was that inconsistent application of the model was hurting the process. The model provides a new, more effective structure for sharing and capturing learning in the organization. However, if the model is not applied, the customary structures for problem solving, learning, and decision making prevail. Not only must the learning model be better applied, but the structures operating preventing its more global use must be understood.

Dixon observes:

> If an organization intends to make maximum use of its learning capability then it is critical that the assumptions it makes about learning facilitate that direction. To do that the tacit assumptions that are a part of the collective meaning structure must again become a part of the accessible meaning structures of the organization so that they may be openly discussed and consciously chosen (1994, p. 127).

EFHD's current process is to apply the learning model in a haphazard fashion. At the root of the issue is the practice of single versus double loop learning at EFHD. Argyris concludes that most organizational learning is single loop, and breaking out of that cycle to a double loop process is difficult. Single-loop learning according to Argyris, occurs when organizational errors are discovered and corrected without questioning or altering the underlying values of the system. He suggests that this phenomenon occurs on individual, group, intergroup, organizational, or interorganizational levels. He defines double-loop learning as occurring when mismatches are corrected by first examining and altering the governing variables and then the actions. Argyris (1992) contends that most organizations, often unconsciously, create learning systems that suppress double-loop inquiry, making it problematic for even well designed information systems to be effective. This phenomenon appears to be impacting EFHD. Brookfield (1986) notes that an important learning skill is to become aware of idiosyncratic learning styles. In essence, this demands new structures for learning. Yet, the pattern of learning is difficult to change. Double loop learning cannot happen without changing the models of organizational structures and processes presently existing. The EFHD application of the learning model—which incorporates double loop learning—is inconsistent. To move the process to the next level, the learning infrastructure will require further attention to help ensure a more global and consistent application of the learning organization process. Watkins and Marsick (1996) conclude that learning organizations must: cultivate a learning habit in people, regularly audit the knowledge capital, and embed a learning infrastructure. EFHD has done this. The current task is to fine-tune the learning infrastructure that has been created.

Infrastructure Argyris notes that, "Organizations learn through individuals acting as agents for them. The individuals' learning activities, in turn, are facilitated or inhibited by an ecological system that may be called an organizational learning system" (1992, p. 123). The "ecological system," or infrastructure at EHFD oscillates between the facilitation and inhibition of learning. A system that oscillates can quickly neutralize change efforts.

When a structure is not working well there is tension. When a structure is challenged, there is more tension, as the immediate reaction is resistance to the change. Fritz eloquently observes that organizational change efforts rarely result in change because, "Change has been imposed on top of inadequate existing structures" (1996, p. xiii). There are fundamental structural principles that most physical structures are constructed according to. Yet, the idea of structural integrity has not transferred to organizational design or management. Some of the issues raised on the EFHD evaluation point to the structure issue.

From a structural perspective, it is important that EFHD employees and leaders focus not on short term events such as the learning organization course, enthusiasm, poor and effective instances of management support, isolated team failures and successes, but rather, focus its attention on the patterns, structures and mental models that are both facilitating and restraining EFHD's progress. The dialogue process stands out as a significant symbol of creating new structure that has delivered positive results. The dialogue process needs strengthening and other similar tools need to be applied.

The infrastructure is where EFHD has leverage. Surfacing and challenging the individual and collective mental models about what it means to be an automotive company, local employer, player in the global economy, *and* a learning organization are critical to EFHD's continued development as a learning organization. There is oscillation on the issues of shared vision and performance, that while not hurting the company are putting it into a neutral pattern of moving forward, then backward. The task is to use the tensions to propel movement toward the vision, not distract from it. There is a significant amoung of energy in the individual and

collective learning processes at EFHD. Continued refinement and use of the learning model is imperative for continued development as a learning organization.

The EFHD experience is a significant one for those interested in the pros and cons of LO implementation. As previously stated, the Ford experience demonstrates clear, measurable performance gains from this process. The objective of the participant evaluation was to look at less tangible issues such as learning and application of the process. This study is not without its limitations. Approximately one fifth of the division's 6000 employees, worldwide, have participated in the learning organization process to date. It is a qualitative study, thus, our goal was not to survey hundreds of participants, but rather to gain a perspective on how a representative group of employees is using (not using) the process.

The EFHD experience offers a glimpse of the trials and tribulations of becoming a learning organization. Learning organizations have the advantage of turning their learning upon themselves in an effort to improve their process and structure. EFHD offers a model of not only becoming a learning organization, but applying the process toward moving learning to the next level.

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